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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,792	08/03/2006	Einar Mantyla	3535-0143PUS1	6466
2292 7590 12/14/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER SAIDHA, TEKCHAND	
			ART UNIT 1652	PAPER NUMBER
			NOTIFICATION DATE 12/14/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/569,792

Applicant(s)

MANTYLA ET AL.

Examiner

Tekchand Saidha

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 15, 16 and 21 is/are rejected.
- 7) ☒ Claim(s) 7-14 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/11/2007 & 2/27/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are present in this application
2. Claims 7-14 & 17-20 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 7-14 & 17-20 not been further treated on the merits.

Any dependent claim which refers to more than one other claim ("multiple dependent claim ") shall refer to such claims in the alternative only. Multiple dependent claims shall not serve as a basis for any other multiple dependent claim.

3. Claims 1-6 & 15-16 are under consideration in this Office Action.

4 Priority

Acknowledgment is made of applicants' claim for priority based on an application filed in Iceland on 8.27.2003.

Applicant's claim for domestic priority under 35 U.S.C. 119(e), filed 8.27.2003, is acknowledged.

5. *Drawings*

Drawing filed 2/27/2006 is acknowledged. Figures 2 and 4 are not clear and it is hard to see the SDS-Page profile of the protein purification. Clarification is requested.

6. *Specification*

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

7. *Claim Objections*

Claim 16 is objected to because of the following informalities: Claim 16 depends upon claim 16. A claim cannot depend on the same claim. Appropriate correction is required. The claim is not rejection for lack of antecedent basis, since it appears to be typographical error.

8. *Claim Rejections - 35 USC § 112* (second paragraph)

Claims 1-6, 15 & 21 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, last line, recites the phrase 'substantially purified'. The claim is vague and indefinite because it is unclear about the extent of purification or does not define the metes and bounds of the claim.

Claims 2-6, 15 & 21 are included in the rejection for failing to correct the defect present in the base claim(s).

9. Claim 4, line 3, refer to different protein purification steps, and ending with the phrase 'or any combination thereof'.

The claim is indefinite because purification steps follow a sequential order; and the ending phrase 'or any combination thereof' is confusing because it disrupts the order of steps. Deletion of the phrase is suggested.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 15-16 & 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Shani et. al. (USP 6,331,416 B1; December 21, 2001).

Claims 1-6, 15-16 & 21 are broadly drawn to a method for production and purification of a soluble heterologous fusion protein comprising a cellulose binding module (CBM), from transgenic plants or transgenic plant cells expressing said fusion protein, comprising -- disrupting transgenic plant material, extraction, separation soluble and insoluble plant material, binding the fusion protein to polysaccharide matrix, washing and eluting the bound material by adjusting the conditions.

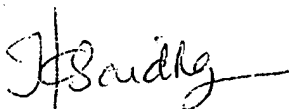
Shani et al. in Figure 1 describe in detail all the essential steps of protein purification (protein of interest and a cellulose binding peptide being fused; wherein the cellulase binding peptide is no different than cellulose binding domain) comprising

homogenization (or disruption) of transgenic plant material, inherent step of separating the solids and binding soluble (containing fusion protein) to a cellulose binding or affinity column, washing and release of the fusion protein by varying the elution buffers to yield the fusion protein or recombinant protein as required. Various column chromatography methods and matrices are described depending upon the requirements (See abstract, claims and the entire specification; binding domains in Table 3 & 4; construction of transgenic plants, among others).

The reference anticipates for teaching all the claim limitations.

11. No claim is allowed.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tekchand Saidha whose telephone number is (571) 272 0940. The examiner can normally be reached on 8.30 am - 5.00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on (571) 272 0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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